

## ROCK ART OF THE SACRED PRECINCT AT MATA NGARAU, 'ORONGO

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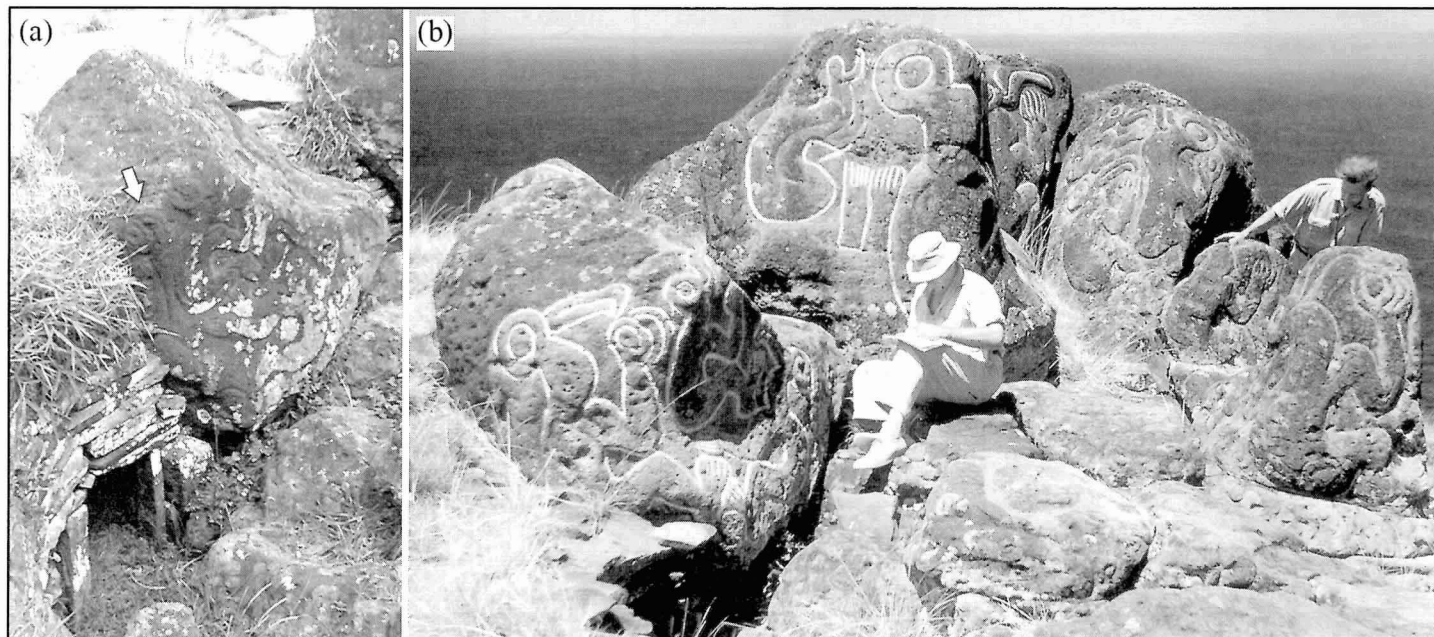
### INTRODUCTION

The ceremonial village of 'Orongo is one of the most fascinating and important sites on Easter Island. Located at the top of Rano Kau's precipitous cliffs, 'Orongo offers awe-inspiring views toward the three off-shore islets of Motu Kao Kao, Motu Iti, and Motu Nui. The village consists of about fifty dry-laid stone buildings (referred to by numbers according to Ferdon 1961: Fig.137), and occupied seasonally during the famous Birdman competition (Routledge 1920:426, Métraux 1940:331-332). The houses are usually overlapping, which probably simplified their construction. All the buildings of 'Orongo form distinct clusters, composed of at least two (e.g., non-restored houses #1, #2), to as many as nineteen houses (upper row, houses #3 - #21). The southern cluster (houses #35 - #47) embraces the sacred precinct of Mata Ngarau — the "ceremonial heart" of 'Orongo. The site is based on a natural basalt outcrop that forms a plaza about 7 by 9 m (Lee 1992:138) surrounded with irregular boulders (loci) up to 1.5 m tall (Mulloy 1997:78). All the aforementioned

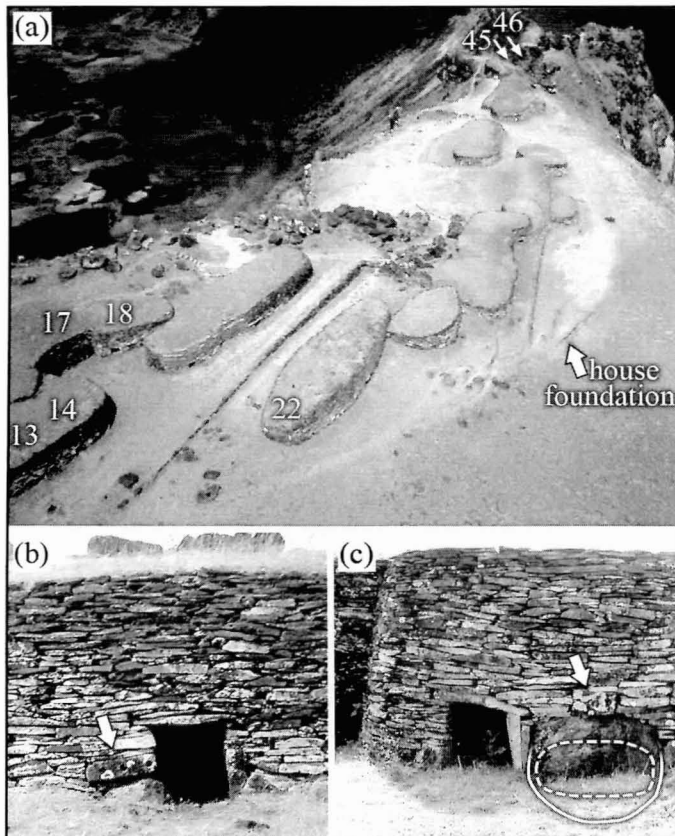
rock surfaces are covered with numerous petroglyphs, creating the highest concentration of rock art on Easter Island (Lee 1992:137). Due to intensive activity over a significant historical period, the rocks of Mata Ngarau present evidence of re-use and re-carving, allowing us to trace the evolution of petroglyph motifs from simple, incised forms to elaborate, bas-relief designs. Such a profound record of rock carving may contain some additional details clarifying the history of the sacred precinct itself and 'Orongo village in general. This paper presents several results obtained from an analysis of the Mata Ngarau carvings.

### CONSTRUCTION OF THE HOUSES

Numerous images of the sacred Birdmen and all-day chanting by the *rongo* men, who lived at Mata Ngarau during the annual ceremonies (Routledge 1919:260, 1920:446), beyond any doubt served to amplify the supernatural power of the place. Its exceptional status made Mata Ngarau off-limits for other people (Lee 1990:69), quite



**Figure 1.** Birdman carving on Locus 45: a) modern view of the site (photo by P. Horley, 2002), restored according to Thomson's photo from 1886; the Birdman design is blocked by the wall, so that only a hand (marked with an arrow) and a foot are visible; b) Mata Ngarau in 1955-56, the Birdman is completely exposed (photo courtesy of the Kon-Tiki Museum).



**Figure 2.** Re-use of construction material in the masonry of the houses: a) kite aerial picture of Orongo (photo courtesy of D. & E. Dvorak), showing the remains of a *hare paenga* foundation. The numbers mark the houses with *paenga* stones embedded in the walls, marked with arrows for: b) house #14 belonging to Taura Renga and c) house #18 (photos by P. Horley, 2002). The latter picture also shows a large slab, probably a former pedestal of the *moai* Hoa Haka Nana I'a. The solid outline denotes slab boundaries (after Routledge 1920: Plate X, Fig. 2); the dashed contour approximates the basal dimensions of the statue according to the measurements by Routledge.

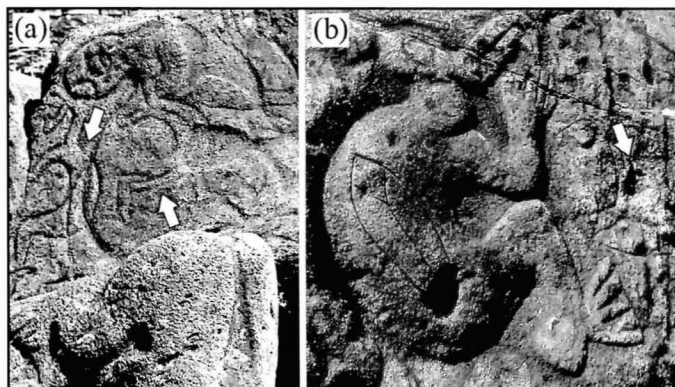
naturally resulting in construction of a physical barrier encircling the *tapu* area — in this particular case, a continuous tier of stone houses. According to Routledge (1920:445), the roofs of the houses opening to the plaza of Mata Ngarau originally blended with the edge of the crater, so that it was necessary to climb the earth ramp to gain access to the site (Mulloy 1997:79). Buried rock carvings in the areas adjacent to the houses (Routledge 1920:450), as well as petroglyphs concealed by the masonry walls (Routledge 1920:448, Métraux 1940:270, Mulloy 1997:78, Lee 1992:29, 137), confirm that construction of the houses post-dates the rock art at Mata Ngarau. Among those petroglyphs that are concealed are a large bas-relief *tangata manu*, carved on the northern side of Locus 45 (Figure 1); it has all the features that are characteristic of the second phase of the Birdman motif (Lee 1992:36).

The earliest historical depiction of Locus 45 dates back to the *Mohican* expedition (Thomson 1891: Plate XXI), proving that, at the time, the Birdman design in question was practically hidden by a solid wall, barely leaving the toes of its foot visible. A photo taken by Routledge almost 20 years later shows the same wall exposing the foot of the Birdman as well as a fan-shape carving behind the heel (1920: Plate XVI, Fig. 2). Sometime before 1946, several Mata Ngarau houses collapsed and were partially restored by Englert (Ferdon 1961:243); however, in 1955-56 the Birdman design at Locus 45 was still completely visible (Figure 1b). During the restoration of 'Orongo village, Mulloy (1997:79) re-constructed the wall and the entrances to the houses according to the photo from Thomson, so that the Birdman carving became almost completely hidden again (Figure 1a).

There is additional evidence to help suggest a relative construction sequence for the Mata Ngarau houses with regard to the other buildings of the ceremonial village. As we know, the remains of a large house foundation were identified during the restoration of the site (Mulloy 1997:84, House #25 in Mulloy's numbering convention), located slightly downhill from the lower row of dwellings (Figure 2a). This foundation is unique to 'Orongo, and belongs to the island's ubiquitous thatched *hare paenga* house type. The downhill position of the foundation most probably was chosen to diminish the destructive action of fierce gusty winds common to this place. It is tempting to speculate that a thatched structure with the traditional design was the first dwelling at 'Orongo but, due to harsh weather conditions, islanders had to construct more stable and sturdy shelters. Falling into disuse, the *hare paenga* was disassembled with further re-use of its foundation stones in the masonry of several houses (Routledge 1920:436).

Surprisingly, the buildings with the embedded *paenga* stones form two distinct well-defined clusters. The first one includes the upper row houses #13, #14 (Figure 2b), #17, and #18 (Figure 2c), plus nearby #22. Another place with re-used *paenga* stones is located at Mata Ngarau (Houses #45 and #46). None of the other buildings (even those directly neighboring the remains of the house foundation) feature embedded *paenga* slabs, possibly implying that the foundation stones were already below the soil when the lower row of houses was constructed. Therefore, it can be hypothesized that Mata Ngarau buildings might have been contemporary with the upper group, including the house known as Taura Renga (#12-14) which once contained the *moai* Hoa Haka Nana I'a.

A *hare paenga* stone embedded into the wall of house #18 rests on the top of a flat, rounded basalt slab (Figure 2c). Clearly seen during the visit of Thomson (1891: Plate XVIII), it was documented in detail by Routledge (1920:436, Plate X). Based on the dimensions of the slab (about 103×85 cm), she suggested that at one time it might have been the pedestal for Hoa Haka Nana I'a, if the latter would not have a "*contracted form of the base ... which is not associated with the ahu, but with the buried statues*" (*ibid.*). The dimensions of the statue base reported by Routledge are 90×45cm (see approximate



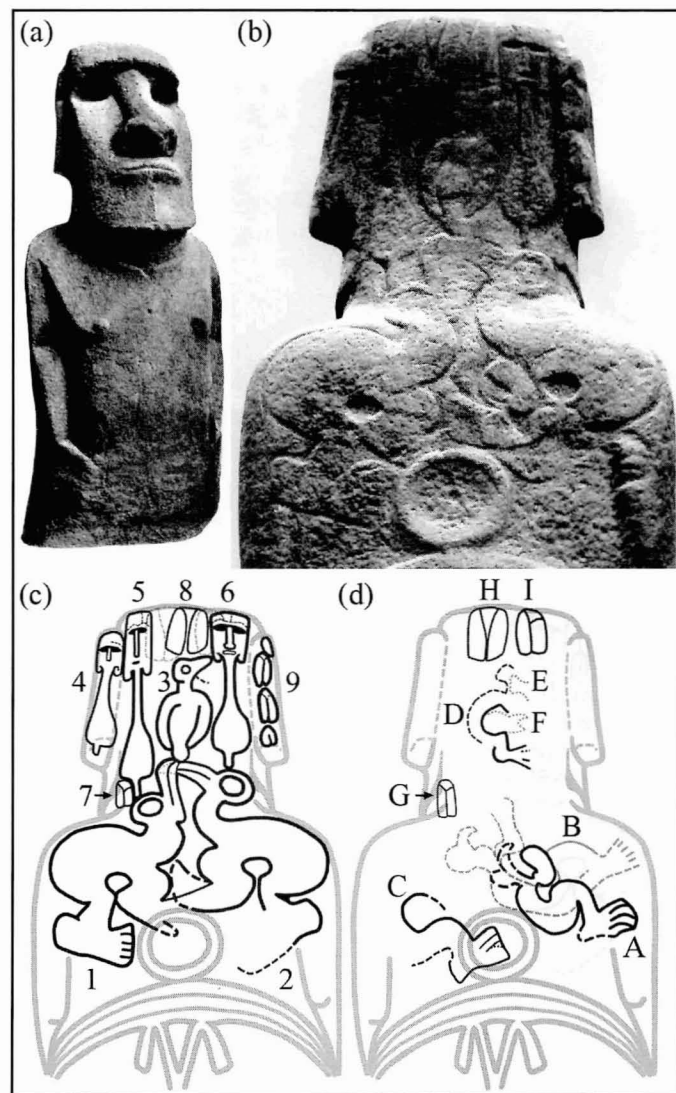
**Figure 3.** Superposition of carvings at Mata Ngarau: a) early-style Birdmen (marked with arrows) overlap later bas-relief design, locus 29 (photo by G. Lee, 1982); b) Birdman petroglyph incised with a *komari*, locus 16 (photo by W. Hyder, 1982). The deep “keyhole” shape between the elbow and knee of a late Birdman design (marked with an arrow) signals the presence of another nearly obliterated petroglyph.

dashed-line contour in Figure 2c). Such proportions are too thin compared with the other *moai* which, together with the absence of *hami* and worn-away fingers (see Figure 4a), is deemed indicative of a deliberate modification (Van Tilburg 1986:581, 2004:47). In any case, the size of the slab discussed would accommodate the statue base even in its “thicker” original form, which further substantiates the argument favoring its possible pedestal function. It is curious that the alleged pedestal stone was re-used together with *paenga* slabs; it is tempting to consider a possible overlap between the period when the pedestal became available and the houses of Taura Renga and Mata Ngarau were constructed.

#### MATA NGARAU CARVING TECHNIQUES AND THE DORSAL DESIGNS OF MOAI HOA HAKA NANA I'A

Carvings at the sacred precinct of Mata Ngarau are among the finest rock art examples on Rapa Nui. The large numbers of the designs — 375 Birdmen, 195 *komari*, and 140 faces — (Lee 1990:69) resulted in numerous superimpositions. Due to the hardness of the rock, removal of earlier images prior to the creation of new ones was not widely practiced, so that multiple carving activities produced a complex pattern of contours. The latter allows us to observe different evolutionary phases for the stylized Birdmen motif, illustrated by more than twenty instances of overlapped petroglyphs (Lee 1992:67). Two such occurrences are shown in Figure 3a. As one can see from the figure, the earlier Birdmen images were formed with incised contours, while the later designs were executed in a bas-relief technique. The second phase of the Birdman motif is characterized by a particular “keyhole” shape formed by the almost touching elbow and knee of the *tangata manu* — a detail rarely emphasized in early carvings. The “keyhole” is usually carved deeply and resists erosion (Lee 1992:67). In some cases, “keyholes” are the only vestiges that remain of an

obliterated Birdman image (Figure 3b). The later fertility cult ceremonies at 'Orongo resulted in numerous *komari* or vulva designs (Routledge 1919:263), sometimes incised over the existing Birdmen (Figure 3b).



**Figure 4.** Hoa Haka Nana I'a: a) front view (photo from Stephen-Chauvet 1945:Fig. 56); b) dorsal designs (photo by S. McLaughlin, 2006); c) tracings of “modern” motifs: 1, 2 – *tangata manu*, 3 – *manu tara*, 4 – *rapa* or *ao*, 5, 6 – *ao*, 7-9 – *komari*; d) tentative re-construction of the earlier carvings: A-F – *tangata manu*, G-I – *komari* motifs.

The beautifully carved *moai* Hoa Haka Nana I'a (Figure 4a) removed from 'Orongo in 1868, is famous for its elaborate bas-relief dorsal designs (Routledge 1919:261, Métraux 1940:298, Van Tilburg 2004:50-51, Van Tilburg 2007). The motifs adorning the statue (Figure 4b) are consistent with the imagery of the ceremonial village. They include two facing Birdmen (the *manu piri* motif; Lee 1992:70) with a sooty tern (*manutara*) motif just above them. Large ceremonial paddles called *ao* (the carving on the left ear may also depict a smaller

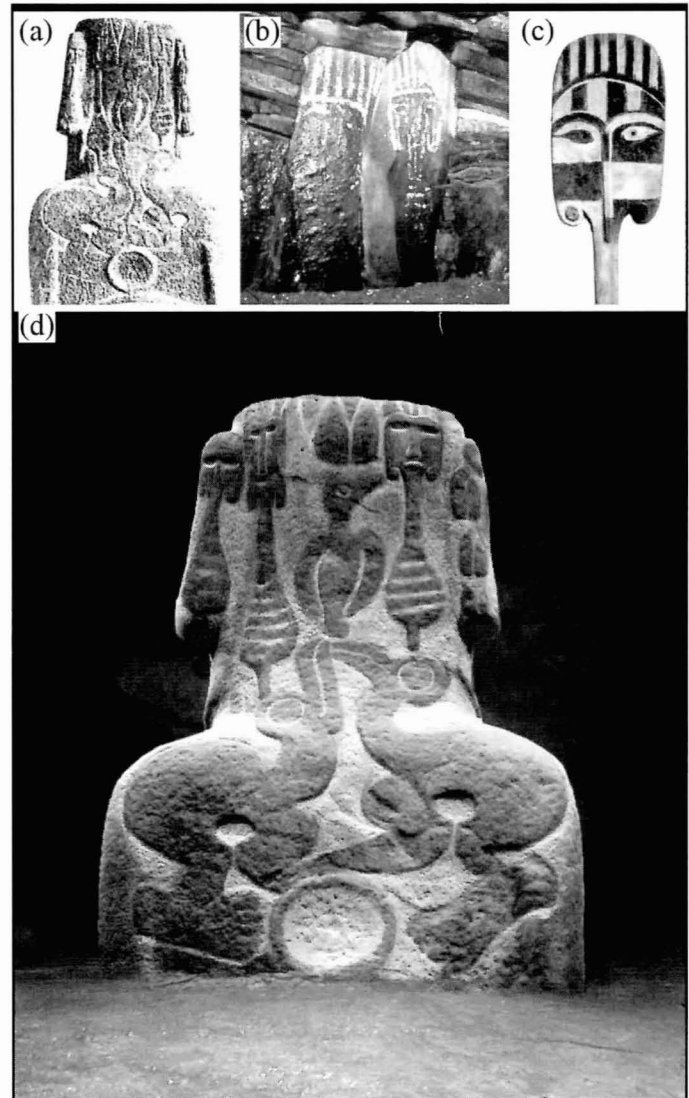


dance paddle or *rapa*; Van Tilburg 2004: 51); several *komari* symbols appear behind the jaw, at the top of the head, and on the backside of the right ear. Figure 4c presents the tracings of these motifs, digitized after the study of various photos of the statue (Routledge 1919:Fig. 106, 1920: Plate IX, Chauvet 1945: Fig. 57, Van Tilburg 2004: Fig. 19, British Museum n/d, and McLaughlin 2006).

As one can see from the picture, the dorsal petroglyphs tend to contact closely or to overlap each other. In particular, there exists a contour for a full-length beak on the right Birdman (Figure 4c.2), covered by the beak of the left *tangata manu*. The *komari* symbols on the top of the statue clearly predate the depictions of *ao*, overlapping the faces of the both paddles (Figure 4c. 5,6); however, a non-intersecting *komari* can be also formed from the existing outlines (Figure 4c.8).

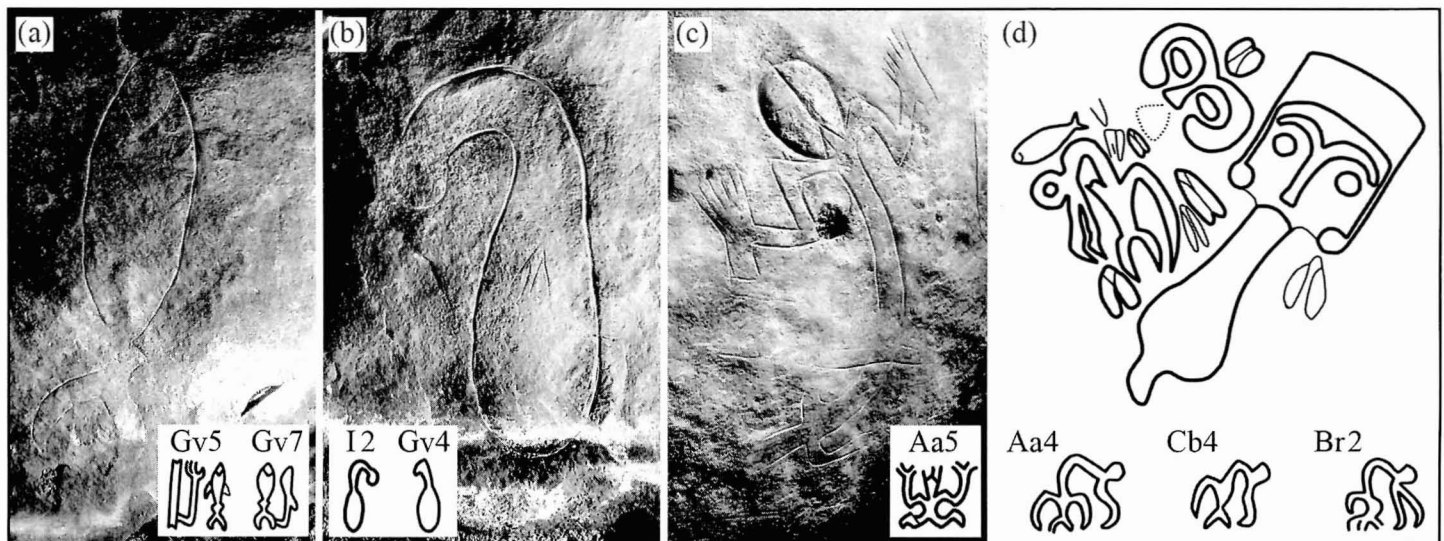
Special attention should be paid to the mixture of the contours between the Birdmen images. After spotting a residual “keyhole” on the hand of the right Birdman (Figure 4b), one can immediately see a complete *tangata manu* image that predates the main carving. The foot of this earlier design (Figure 4d A) coincides with a heel of a “modern” Birdman, explaining the pronounced horizontal strokes on the latter. The arm of the right *tangata manu* actually follows another earlier design, which is also responsible for a foot-like contour visible on the back of its body (Figure 4d. B). There are several traces of earlier designs over the left “modern” Birdman, one of which is shown in Figure 4d.C. The knee of this older carving is located just above the foot of the later *tangata manu*, creating an illusion that it has six toes (actually, six-toed foot petroglyphs exist on the island, but appear only at two sites — close to Rano Raraku and at Ahu Ra'ai, Lee 1992:62, Fig. 4.30). Several underlying carvings also depict a comparatively poor execution of the *manutara* design; its unusual rounded tail corresponds to the heel of the earlier image (Figure 4d. D). Two faint contours in this area may help to re-construct other designs (Figure 4d. E, F). We also outlined the original shapes of *komari* carvings, overlapping the “modern” motifs and thus pre-dating them (Figure 4d. G-I).

To the best of our knowledge, these earlier carving have not been previously discussed. At the same time, their existence leads to several important conclusions. First, the multi-layer rock art on the back of Hoa Haka Nana I'a proves the long and complicated history of the statue, and resembles that of the intensively and dynamically re-carved rocks of Mata Ngarau. The presence of two Birdman designs (Figure 4d. A,B) with a distinct orientation that is different from the other motifs makes it tempting to assume that, after standing on an *ahu* (which is suggested by its carved eye sockets), the statue was toppled over onto its right side. Most probably, the *moai* spent some time in this position, so that an early-style *tangata manu* was incised on its back, then replaced with a second-phase Birdman. Moreover, a lateral position such as this would also allow easier removal of the *hami* and the fingers of the statue. Later, the image was re-erected and planted into the ground, so all further petroglyphs appear on its back with the proper orientation for a standing *moai*.



**Figure 5.** Paintings on Hoa Haka Nana I'a: a) traces of white paint seen on the statue (photo from Routledge 1919: Fig. 106); b) painting of *ao* (house #26) with characteristic stripes across the “body” (photo by G. Lee, 1982); c) *ao* collected by Thomson (photo from Chauvet 1945:Fig. 97); d) tentative reconstruction of the paintings on the back of *moai* Hoa Haka Nana I'a (base photo by S. McLaughlin, 2006; see also Figure 4b). The background image was synthesized from the pictures of exterior masonry of 'Orongo houses and interiors of Ana Kai Tangata and Ana O Keke (photos by P. Horley, 2002).

Accounts describing discovery of Hoa Haka Nana I'a at 'Orongo relate that the statue was painted. But the colors were mostly washed away upon its transport to HMS *Topaze* (Palmer 1870a:115, 1870b: 177-8; Dundas 1870:319). According to a contemporary depiction (Orliac & Orliac 2008: Fig. 46), the *moai* was dragged down the grassy slopes of Rano Kau on a sledge, head-forward and in supine position. Such transportation implies that paint would be quickly brushed from the lowest rock surfaces (back of the head and body), but



**Figure 6.** Petroglyphs inside Mata Ngarau houses (photos by W. Hyder, 1982) and their possible relation to the signs of *rongorongo* script: a) fish with a "bulb" at the base of the tail; b) house #44, hook-shaped object (a gourd?) with an inscribed *komari*; c) house #43, anthropomorph with a head replaced by *komari*; d) petroglyph group (after Koll 1991:Fig. 1) from house #40, including a long-beaked bird similar to sign 660. *Rongorongo* glyphs along bottom of figure are traced after: Ramírez & Huber 2000:121 (G, Small Santiago tablet); Flenley & Bahn, 2002:Fig. 54 (I, Santiago staff); Chauvet 1945:Figs. 168, 170 (A, *Tahua* tablet); Orliac & Orliac 2008: Fig. 190 (B, *Aruku Kurenga* tablet) and Fig. 193 (C, *Mamari* tablet).

the paint may have remained in the area around the base of the neck, which had less contact with the grass. The validity of this suggestion is confirmed by the photo published by Routledge almost half a century later (Figure 5a), clearly revealing some white background around the heads of both Birdmen and the lower part of the right *ao*, as well as in the grooves marking the eyes of *tangata manu*, wings of *manutara*, and also in the eye sockets of the *ao* paddles. It is worth noting that the *ao* carvings also feature white horizontal stripes, as seen in 'Orongo paintings and surviving artefacts (Figure 5b; Orliac & Orliac 2008: 185). The sketch published by Dundas (1870: Plate XVII) illustrates the statue with traces of white color in the same areas. Dundas's frontal drawing of the *moai* (*ibid.*) perfectly matches the photo of the statue standing in a box on the deck of HMS *Topaze* (Van Tilburg 2004: Fig. 1). This detail suggests that the sketch of the dorsal designs, depicting the image exposed to the same height as the front view, was also made after the statue was brought onboard. A recent photo (*ibid.*, Fig. 19) allows us to distinguish faint traces of red pigment over the left Birdman and lower parts of the *ao*. Similar traces are also seen below the raised ring and girdle design. As we know, the statue was found planted in the ground up to its waist (Palmer 1870b: 115) or even deeper (according to the sketch by Lt. Matthew; Van Tilburg 2004: Fig. 16). Thus, no pigment is expected to remain on the buried part, or it might have washed away by rains when the *moai* was standing on the deck.

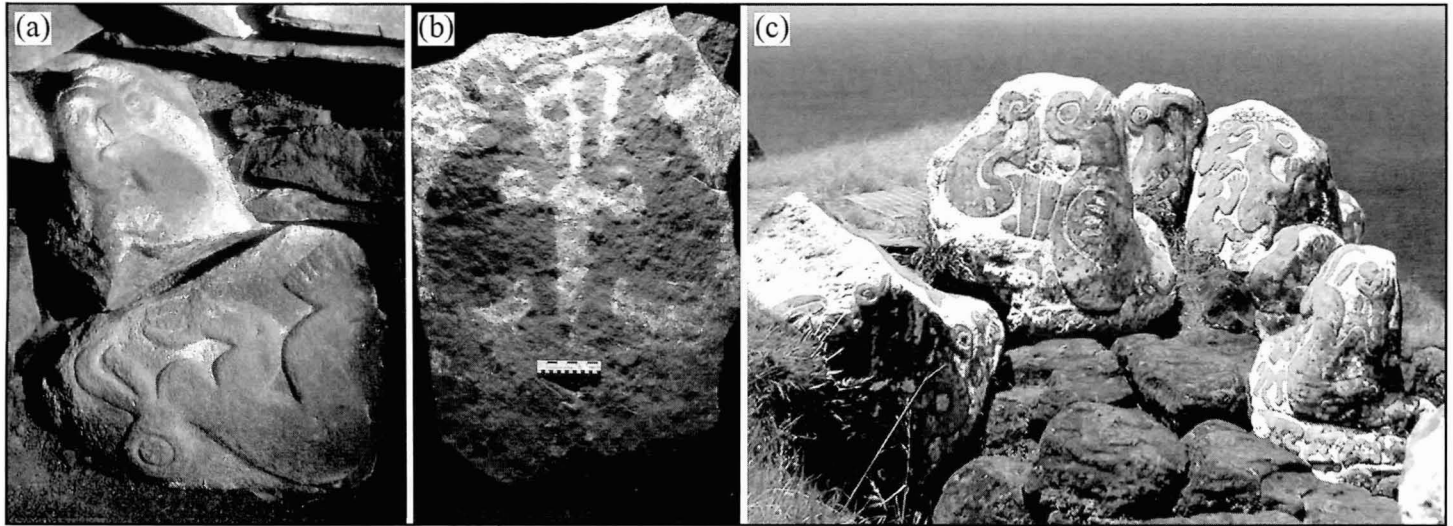
Therefore, the analysis of historic and modern photographs allows us to confirm that bas-relief petroglyphs on the back of *moai* Hoa Haka Nana I'a were painted in red, while their background was in white pigment, exactly as mentioned

by Dundas (1870:319) and Routledge (1919:257). The same body / background colors are characteristic of the majority of 'Orongo paintings (Ferdon 1961:236-240). The results obtained were visualized as a tentative re-construction of the paintings adorning the dorsal part of *moai* Hoa Haka Nana I'a (Figure 5d). The statue is assumed to be buried to a depth accommodating a complete view of its carvings, i.e., to the feet of the *manupiri*. This would make the *moai* exposed about 140 cm above the ground, which acceptably fits the *in situ* sketch by Lt. Matthews. The upper parts of the *ao* were colored in vertical stripes, following the fashion observed in other paintings from 'Orongo and surviving artefacts (Figure 5b,c).

#### ROCK ART INSIDE MATA NGARAU HOUSES

A record of the petroglyphs inside of 'Orongo houses was performed by Robert Koll, revealing as many as 173 motifs, including 130 *komari* (Koll 1991:61). Fifty-two designs were documented for Mata Ngarau houses and 40 of these are *komari* (*ibid.*, 62). As we know, the houses of the sacred precinct were occupied by *rongorongo* men (Routledge 1919:260, 1920:446; Métraux 1940:335). Therefore, one may hope to find here petroglyphs that are similar to the signs of the script — which was confirmed by the images of William Hyder (2007) and Robert Koll (1991).

One of the carvings inside the houses depicts a fish with a "bulb" at the base of the tail (Figure 6a). This detail rarely appears in rock art. For examples recorded, see Lee 1992: p.93 (marine creature north of 'Anakena), p. 94 (sea creature, 'Anakena), pp. 164 and 165 (needlefish and tuna, Hau Koka



**Figure 7.** Use of color: a) Birdmen carvings inside Mata Ngarau house, featuring the traces of a white-painted background (photo by W. Hyder, 1982); b) painted slab with a facing Birdmen motif *manupiri* (photo by M. Oliver / W. Hyder, 1982); c) tentative re-construction of the painting applied to the loci of the sacred precinct (base photo by P. Horley, 2002).

site), and p. 185 (tuna, Papa Tataku Poki). However, the “tail bulb” is quite common on fish and marine creature glyphs (700b, 721, and 733) that are incised on various *rongorongo* tablets. The gourd petroglyph (Routledge: “a figure shaped like a hook”, 1920: 447) corresponds to *rongorongo* sign 074 (Figure 6b), occurring 94 times among 14,552 glyphs recorded by Barthel (1958:109). House #43 at Mata Ngarau shelters a panel with 12 *komari*, one of which is stylized as a fish; another one is associated with an anthropomorphic creature or a lizard (Figure 6c). It is not clear if the carver intended to render a headless image with *komari*, or to depict a creature with a head replaced by the latter, which may be similar to a sign from the *rongorongo* tablet *Tahua*. The petroglyph group from ‘Orongo house #40 includes a bird with a long beak, corresponding to *rongorongo* glyph 660 (Figure 6d), occurring 29 times in the script (Barthel 1958:144). Usually the beak of the glyph is closed, but open-beak versions also exist in lines Br2, Br7, Pr2, and Ua3.

Apart from house interiors, the long-beaked bird design can be found on Loci 31 and 17 at the sacred precinct (Lee 1992: Figs. 4.48 and 4.97, respectively). Locus 17 is especially interesting, as it features a *reimiro*, a “sitting man”, an eye mask, and a bird with a star around its head, all of which have parallels in *rongorongo* (Signs 007, 240, 513, and 550, respectively). Additionally, two-headed versions of the long-beaked bird motif corresponding to the sign 680 (occurring 23 times in the known script corpus, Barthel 1958:145) are also found at Mata Ngarau, Loci 6 and 31 (Lee 1992: Figs. 4.45 and 4.48).

The rock art examples mentioned, despite displaying clear parallels to the individual *rongorongo* signs, do not form any continuous text. However, it is important to emphasize that Mata Ngarau carvings contain *far more* petroglyphs related to the script than any other site discussed (Lee 1992:126-128, McLaughlin 2004:90-93, Horley 2005:114), strengthening connections between the sacred precinct and *rongorongo* men.

One of the Mata Ngarau houses shelters two elaborate bas-relief Birdmen that still contain white pigment on the background around the carving (Figure 7a). These designs are exceptionally important, suggesting the possible use of color for Mata Ngarau’s petroglyphs, and highlight unified painting tendencies in general for the whole ‘Orongo village. Indeed, the majority of the documented paintings inside the houses (Routledge 1920:431-445, Ferdon 1961:236-240), including a slab decorated with *manupiri* (Figure 7b) are painted red on a white background; the same results were obtained for Hoa Haka Nana I’a (Figure 5). Red on white painting also appears in places related to the Birdman cult — in Ana Kai Tangata and in Motu Nui’s caves (Lee 1992:187-191).

As we know, the color red is special in Polynesian art and culture; it is connected with sacredness and represents the color of life (Lee 1992:186). In rock painting, red pigment is usually accompanied by a white background or outlines in order to enhance visual contrast (*ibid.*, 187). Red scoria prominently appears at the ceremonial sites of Rapa Nui, either in the form of statues, *pukao*, or slabs decorating the *ahu* (Flenley & Bahn 2002:145). Wooden images were preferably carved from the reddish *toromiro* wood (Orliac & Orliac 2008:263); additionally, the nostrils of *moai kavakava* were often filled with red pigment, probably intended to depict the breath of life (*ibid.*, 113).

Application of the sacred color red over an existing rock carving might have had a special ceremonial meaning (Lee 1992:191), possibly amplifying the *mana* of the design and “awakening” it to life. For the case of monumental sculpture, the similar effect might have been achieved by the insertion of coral eyes into the carved eye sockets of statues standing on the *ahu* (Flenley & Bahn 2002:109). A tentative hypothesis about the use of color at the sacred precinct Mata Ngarau (Figure 7c) offers several interesting conclusions.

In the first place, painting of the loci surrounding the



court would restore the “balance” between vivid decoration of ‘Orongo houses and Hoa Haka Nana I’a, contrasting with the elaborate but colorless rocks of Mata Ngarau. Proper application of paint would also help to resolve the complicated mixture of contours resulting from the multiple superimposed designs. Moreover, the choice of bas-relief carving technique is practical for painting, because the elevated parts avoid the inflow of background color when exposed to the rain, preserving the image from smudging for a longer time as compared to a painting made over an incised petroglyph.

Due to the annual nature of *tangata manu* competitions, the paintings would likely wash away between successive events at ‘Orongo. Therefore, at the beginning of the new Birdman ceremony, it would be necessary to re-paint the designs, evoking the *mana* of the previous sacred Birdmen. Such action, performed by the priest living in a house at Mata Ngarau, most probably was accompanied by special rituals including chanting, and this fits perfectly descriptions provided by Routledge (1919:260, 1920:446).

## CONCLUSIONS

The special cultural significance of Mata Ngarau and the intensive use of the site during the annual Birdmen ceremonies resulted in a unique and extremely rich record of Rapa Nui rock art. Many petroglyphs at the site can be directly related to the signs of *rongorongo* inscriptions, far overcoming the number of parallels observed at other sites. Studies of dynamics and the carving evolution observable at Mata Ngarau allowed us to detect similar re-carving activities in the dorsal designs of Hoa Haka Nana I’a, revealing the presence of earlier petroglyphs, determining the shape of later designs, and suggesting that the statue was lying on its right side for a considerable period of time. Evidence for the later construction of Mata Ngarau houses, complemented by re-use of *hare paenga* slabs and a possible pedestal stone of Hoa Haka Nana I’a in the masonry of ‘Orongo houses, suggest several contemporary construction activities at the ceremonial village. Observed traces of paint on the protected bas-relief Birdmen carvings inside Mata Ngarau houses, historical documentation of Hoa Haka Nana I’a, and painted slabs of ‘Orongo, allows us to propose a tentative re-construction for the dorsal painting of the statue and the loci of the sacred precinct, which might have been important for the ceremonies carried out at the site.

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“ — Joan Seaver Kurze (on Easter Island as a microcosm of the Earth) ”